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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/844,251

04/27/2001

Richard H. Morrison JR.

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10/19/2004

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EXAMINER

ROJAS, BERNARD

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 09/844,251	Applicant(s) MORRISON ET AL.	
	Examiner Bernard Rojas	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07222004</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____. |
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DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Claims 15 and 12-15 in the reply filed on 07/26/04 is acknowledged. The traversal is on the ground(s) that Claims 1-5 are generic. This is found persuasive, as claims 1-5 are generic.

Claims 6-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/26/04.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Lutz et al. [US 4,617,542].

Claim 1, Lutz et al. discloses a process for preparing the contacts on microswitches, said process reducing the resistance of said microswitches and maintaining the low resistance of said microswitches for many cycles, comprising

a. obtaining microswitches [figure 2] and

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b. exposing said contacts from said microswitches to a fluid [18'] for preparing said microswitches.

Claim 2, Lutz et al. discloses the process of claim 1 wherein said microswitch is a microrelay [figure 2].

Claim 3, Lutz et al. discloses the process of claim 1 wherein the contacts are made of gold [abs].

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al. [US 4,617,542] in view of Kasai et al. [US 6,483,395].

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Claim 4, Lutz et al. discloses the process of claim 3 with the exception of making the contact out of ruthenium.

Kasai et al teaches using ruthenium contacts.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use ruthenium contacts in the microswitch of Lutz et al. in order to reduce the adhesive force of the contact electrode down to such a degree that the adhesive force does not harmfully influence an operational characteristic of the micro-machine switch [col. 5 lines 13-16, col. 7 lines 25-33].

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al. [US 4,617,542] in view of Ma et al. [US 6,483,395].

Claim 5, Lutz et al. discloses the process of claim 3 with the exception of the claimed process of fabricating the microswitch as outlined in FIG. 3.

Ma et al. teaches fabricating the microswitch as outlined in Fig 5

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fabrication process of Ma et al. in order to reduce the size of the microswitch.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al. [US 4,617,542] in view of Younger et al. [US 5,959,338].

Claim 12, Lutz et al. discloses the claimed invention with the exception of preparing the microswitch comprises materials selected from the group consisting of oxygen, carbon tetrafluoride, sulfur hexafluoride or other fluorine-containing gases, argon and mixtures thereof.

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Younger et al. teaches using argon [27] to prepare a contact [col.3 lines 25-35].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use argon to control the operational speed of the microswitch [col.3 lines 25-35].

Claim 13 and 14, Lutz et al. in view of Younger et al. disclose the claimed invention except for specific material used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to alter the material used in order to obtain a desired contact resistance. Since applicant has not disclosed that the claimed material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the use of argon.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kasai et al. [US 6,483,395].

Claim 15, Kasai et al. discloses a microswitch with ruthenium contacts [figure 1, col. 5 lines 13-16, col. 7 lines 25-33].

Kasai et al. fails to teach exposing the contacts to oxygen plasma.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to exposing the contacts to oxygen plasma since it was known in the art that oxygen plasma is a common etching process.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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